

Claims

1. A method for indicating one or more terminal capability requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system, **characterized** in that said method comprises the step
5 of

-transmitting a broadcast or multicast message indicating said terminal capability requirements over the air interface to at least one terminal within the service range in order to allow the terminal to determine whether it is capable of receiving the service or not (822), said requirements being indicated in
10 relation to at least one of the following: time slot configuration, modulation type, bit rate, capability class.

2. The method of claim 1, **characterized** in that a decision of whether to receive the service or not is made in the terminal on the basis of said indication.

3. The method of claim 1-2, **characterized** in that it further comprises a step
15 wherein said requirements for receiving the service are defined (820).

4. The method of claim 1-2, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (824).

5. The method of claim 1-2, **characterized** in that said requirements are
20 indicated in said message implicitly with an identifier associated to a certain set of requirements.

6. The method of claim 1-2, **characterized** in that said requirements are indicated in said message explicitly with parameters.

7. The method of claim 1-6, **characterized** in that said system is substantially
25 GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.

8. The method of claim 1-7, **characterized** in that said message is transmitted to the terminals over radio access network.

9. The method of claim 8, **characterized** in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).
10. The method of claim 1-8, **characterized** in that said message is originated by a network element.
11. The method of claim 1-10, **characterized** in that said message is sent by the CBC (Cell Broadcast Centre) or RNC/BSC (Radio Network Controller/BaseStation Controller).
12. The method of claim 1-8, **characterized** in that said message is substantially a schedule message.
13. The method of claim 12, **characterized** in that said schedule message is CBS (Cell Broadcast Service) service specific.
14. The method of claim 1-6, **characterized** in that said message is a discrete indication message.
15. 15. A method for indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system to be performed by a terminal operable in said system, **characterized** in that said method comprises the step of
- 20 -informing the terminal's capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system in order to enable the system to deduce on the basis of the informed data whether the terminal is capable of receiving the service or not (804).
16. The method of claim 15, **characterized** in that it further comprises a step (806) wherein the system either accepts or rejects the terminal's join request based on said deduction.
- 25 17. The method of claim 15, **characterized** in that said system is substantially GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.

18. The method of claim 15, **characterized** in that said informing is performed over a radio access network that is substantially GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).

19. The method of claim 15, **characterized** in that said informed data indicates at least one of the following features supported by said terminal: time slot configuration, modulation type, bit rate, capability class.

20. The method of claim 15-16, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (810).

21. The method of claim 16-20, **characterized** in that said point-to-multipoint service is substantially a multicast service.

22. The method of claim 16-20, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

23. A terminal (900) operable (904, 906, 914, 915) in a wireless system, comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that said terminal is arranged to receive a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception and further arranged to determine on the basis of said requirements whether it is capable of receiving the service or not, said requirements indicated in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class.

24. The terminal of claim 23, **characterized** in that it is arranged to specify said requirements indicated in said message by associating at least one identifier included in said message to a certain set of requirements.

25. The terminal of claim 23, **characterized** in that it is arranged to extract said requirements directly from said message wherein said requirements are described explicitly.

26. The terminal of claim 23, **characterized** in that said message to be received is a point-to-multipoint message.

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27. The terminal of claim 23, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile Telecommunications System) terminal.
28. The terminal of claim 23, **characterized** in that it is arranged to extract said
5 indications of service requirements from a schedule message.
29. The terminal of claim 23, **characterized** in that it is arranged to receive said message from the system over the air interface congruent with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.
30. A terminal (900) operable (904, 906, 914, 915) in a wireless system,
10 comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that it is arranged to inform its capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system for the examination of fulfilment of point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service)
15 service reception requirements.
31. The terminal of claim 30, **characterized** in that said informing is to be included in a join request for a multicast service.
32. The terminal of claim 30, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile
20 Telecommunications System) terminal.
33. A network element (918) operable (920) in a wireless system, comprising processing means (923) and memory means (921) for processing and storing instructions and data, **characterized** in that it is arranged to send a message indicating requirements in relation to at least one of the following: time slot
25 configuration, modulation type, bit rate, and capability class, for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception to be delivered to at least one wireless terminal within the service range in order to allow said wireless terminal to determine whether it is capable of receiving the service or not.
34. The network element of claim 33, **characterized** in that said message to be
30 sent is a point-to-multipoint message.

35. The network element of claim 33, **characterized** in that it is arranged to define said requirements for receiving said point-to-multipoint service.

36. The network element of claim 33, **characterized** in that it is arranged to receive said requirements for point-to-multipoint service reception prior to
5 indicating them.

37. The network element of claim 33, **characterized** in that it is arranged to insert said indication of requirements into said message by at least one identifier associated to a certain set of requirements.

38. The network element of claim 33, **characterized** in that it is arranged to insert
10 said indication of requirements into said message explicitly by at least one parameter.

39. The network element of claim 33, **characterized** in that said it is arranged to operate in a GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System)
15 system.

40. The network element of claim 33, **characterized** in that it is arranged to transmit said message to be delivered over radio access network.

41. The network element of claim 40, **characterized** in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS
20 Terrestrial Radio Access Network).

42. The network element of claim 33, **characterized** in that it is substantially the CBC (Cell Broadcast Centre).

43. The network element of claim 33, **characterized** in that said message to be sent is substantially a schedule message.

25 44. The network element of claim 33, **characterized** in that said message to be sent is a discrete indication message.

45. The network element of claim 33, **characterized** in that said point-to-multipoint service is substantially a broadcast or multicast service.

46. The network element of claim 33, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

5 47. A network element (918) operable (920) in a wireless system, comprising processing means (923) and memory means (921) for processing and storing instructions and data, **characterized** in that it is arranged to receive a notification from a terminal in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, and deduce on the basis of said notification whether the terminal is capable of receiving a point-to-multipoint
10 MBMS (Multimedia Broadcast/Multicast Service) service or not.

48. The network element of claim 47, **characterized** in that it is arranged to accept or reject the terminal's join request based on said decision.

49. The network element of claim 47, **characterized** in that said point-to-multipoint service is substantially a multicast service.

15 50. The network element of claim 47, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

51. A system comprising a network element (918) and at least one wireless terminal (900) operable in said system, **characterized** in that said network element
20 (918) comprises means (920) for sending a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to be delivered to at least said wireless terminal (900) within the service range and said terminal (900) comprises
25 means (906, 914, 915, 910) for receiving said broadcast message indicating requirements for point-to-multipoint service reception and means (908) for determining on the basis of said requirements whether it is capable of receiving the service or not.

52. The system of claim 51, **characterized** in that said message to be sent is a
30 point-to-multipoint message.

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53. The system of claim 51, characterized in that said network element (918) further comprises means (923) for defining said requirements for point-to-multipoint service reception.

- 5 54. The system of claim 51, characterized in that said network element (918) further comprises means (920) for receiving said requirements for point-to-multipoint service reception prior to sending said message indicating said requirements.